

UTAH DEPARTMENT OF TRANSPORTATION

TRAFFIC OPERATIONS CENTER

MONTHLY REPORT **JUNE 2004**

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 Phone: 887-3700 Fax: 887-3797 commuterlink.utah.gov



Field Devices Summary

Freeway Closed Circuit Television (CCTV)	171
Surface Street CCTV	32
Dial-up CCTV	35
Total CCTV	238
Freeway VMS	45
Surface Street VMS	17
Portable VMS	2
Total VMS	64
HAR (6 deployed, 5 portable units)	11
TMS	243
RWIS	41
Connected Traffic Signals (includes closed loop)	700
Connected Ramp Meters	23



Richard Manser Accepts ITS America Award for
Return on Investment

Operations Summary

VMS Messages Displayed	839
Signal Timing Calls	51
Signal Maintenance Calls	256
New Work Orders	428
Incident Responses	997
Website Visitor Sessions	109,043
511 Calls	17,470
Email Alerts Sent	433
Weather Desk Calls	110
CommuterLink Questions	23

KUDOS!

I was returning from a trip to Washington State. Not only was I anxious to get home, so were the other six (sleeping) people in the van. As I came southbound into North Ogden I noticed the VMS was active. It was a message telling me that I-15 was closed at Farmington and to detour up I-84 to US-89 and then south to I-15. The TOC was right. The advice was timely, the detour straightforward, and I had undoubtedly saved time. I just wanted to be sure you and your operators knew of my appreciation for helping us avoid a serious delay.

Thank you very much.

Degen Lewis

TOC Employee of the Month



Alan Peterson – Incident Management Team

TOC Mission

1. To Support UDOT and the Department of Public Safety in Improving Highway Safety.
2. To Help Provide Reliable and Efficient Travel.
3. To Provide Useful and Timely Real-time Traffic Information.
4. To Work Together with Other Government Agencies to Serve the Public.
5. To Provide Excellent Customer Service.

ACTIVITY HIGHLIGHTS

TOC Activities

This Month

1. The latest issue of ITS America provides an overview of the ITS America Conference held in San Antonio Texas last April. The main article in the newsletter features a picture of Richard Manser accepting the Best of ITS award for Return on Investment from Chairman Brent Bair. Richard received this award on behalf of CommuterLink at the ITS America annual meeting held in San Antonio, Texas. Utah's return on investment equates to receiving 16.7 dollars in benefits for every dollar spent on deployment. The benefits are obtained from reduced delay and fuel consumption, prevention of crashes, and reduced clearance times. CommuterLink prevents 948 crashes and saves 3 lives every year in Salt Lake County.
2. The TOC stepped up usage of Highway Advisory Radios (HAR) during the month of June. The ATMS Maintenance crew has been instrumental in deploying portable HAR units to various locations. The portable HAR was especially helpful during construction closures on I-15 that affected the entire freeway for extended periods of time.
3. Many new faces can be seen around the TOC this summer. Kelly Gardner is the newest member of the TOC Operations Staff. The TOC has six interns that are assisting with projects this summer. Phillip Miller is working with Bryan Chamberlain; he is working as a control room operator and will work the overnight shift as the TOC experiments with 24-hour operations. Jesse Barton is working with Joe McBride to inventory the overhead lighting on the freeway system. Jeff Erdman is working with Sam Sherman on a semi truck rollover sign study on Highway 6 in Spanish Fork Canyon. Wen Zhang is working with Mark Taylor to improve the database for timing and routine maintenance. He is also working with Ralph Patterson creating an application that links RWIS data with a GIS map. Xiaodong Wang is also working with Mark Taylor on various traffic modeling assignments. Luke Seegmiller is working with Chris Siavrakas creating maps of interchanges throughout the Valley using Microstation, providing aerial views of the interchanges. Matt Hebdon, stationed in Price, is assisting the control room by monitoring conditions on SR-6 through the various construction projects from Spanish Fork to I-70.
4. The TOC upgraded its security system and changed to Utah Controls, which installed and will maintain the new security system. Utah Controls currently is maintaining the security system at the Calvin Rampton building, the State Capitol and other government buildings. This upgrade will provide security access to employees who visit different State buildings the ability to enter with the use of only one card. New security equipment was also installed in the new rooms on the 2nd floor of the TOC and the new Maintenance Building.
5. A National meeting for IEEE 1512 (Incident Management Working Group) was held in Salt Lake in June. One of the three days was spent at the TOC where the committee members observed the TOC operations and then discussed standards for incident management messaging. The other two days of the workshop were spent at the Holiday Inn working on deployment of the new CAD interface.
6. Clearchannel Broadcasting hosted the annual TOC Summer Barbeque. Mike McKay of Clearchannel was the master of ceremony. Several prizes were awarded for different events and competitions from hotel stays to golf passes. Alan Peterson was presented as the employee of the month, and Richard Manser presented the Best of ITS award. Thank you Clearchannel for hosting our summer event! Employees from the TOC, Region 2, and the Complex attended the festivities.



TOC Summer Barbeque

ATMS Improvement and Expansion Activities

The following is a list of many of the projects that have either been completed, or are currently underway:

Statewide:

- The contract for LED Variable Message Signs has been awarded. The vendor, Daktronics, will provide a Vanguard brand sign. Through this contract the State and local agencies can purchase three types of LED signs: Freeway, Surface Streets, and Trailblazer type signs.
- Phase 2 of the base conversion of the ATMS software is nearly complete. Programmers have installed the new Incident Management Software (IMS) and have been running the software through the month of June. Operators have been trained on the new software, which is planned to be implemented on July 31st.

Region 1:

- Equipment installations have been completed along I-215 from 1000 North to 2600 South in Bountiful. The next stage of deployment will involve making software changes so that the TOC Operators can view and control these new cameras. This area of the freeway has not been viewable in the past, making this addition an important one.
- Evaluations were made to help determine what types of traffic signal controllers should be ordered and if the cabinets should be ordered as “ready to be installed” units.

Region 2:

- Fiber optic cable has been installed on 5600 West from SR-201 to 3500 South. This fiber installation is part of the USANA Amphitheater Traffic Signal Project. This project will connect two CCTV and six traffic signal controllers to the TOC enabling engineers to accommodate better the event traffic for the amphitheater.
- Ethernet equipment arrived for Hub 4, which will be used to convert the Synchronous Optical Network (SONET) to an IP over Ethernet network which protocol is being used for all new deployments. The IP equipment will replace multiplexers and eventually fiber modems currently in use, and will provide the foundation for IP conversions in the field.

Region 3:

- A Commercial Vehicle Crash Analysis Study was completed during the month of June. The study included a site visit to I-70 in Colorado to see how a curve warning system is utilized to prevent rollovers. The rollover study also includes research on Highway 6 in Spanish Fork Canyon to see how effective a Curve Warning System would be in that location. The report for this study is expected to be released in the month of July.
- Planning for a fiber optic interconnect with the cooperation of UTA is underway. This project plans to use the existing conduit within the railroad easement near the Point of the Mountain to University Parkway in Orem. UTA in turn will receive access to the fiber backbone to access their station on Geneva Road.
- Planning is underway to connect five CCTV to fiber in the Orem area. Four cameras will be connected along State Street (US-89) and one at the I-15 and University Parkway interchange. These connections will be made to the existing Orem City fiber optic network.

Region 4:

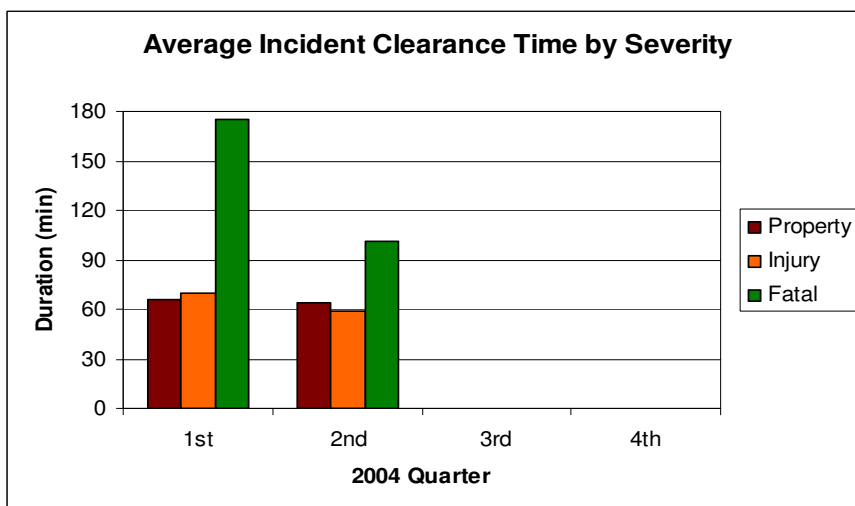
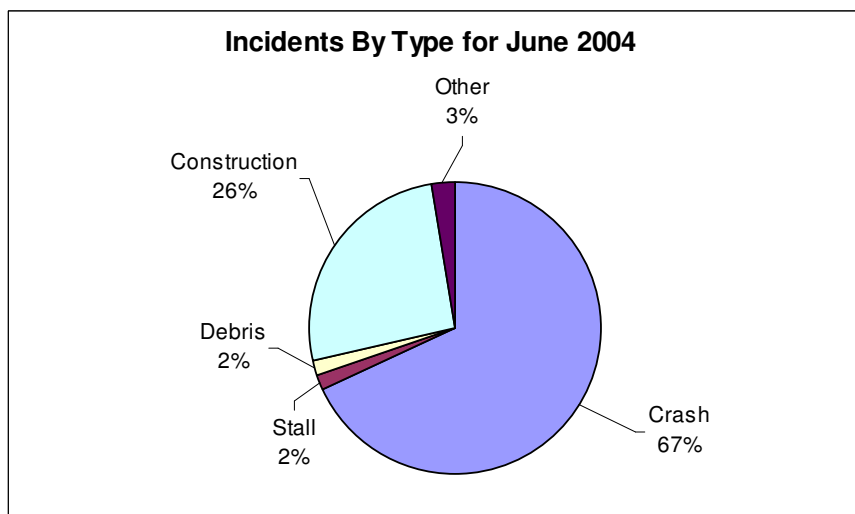
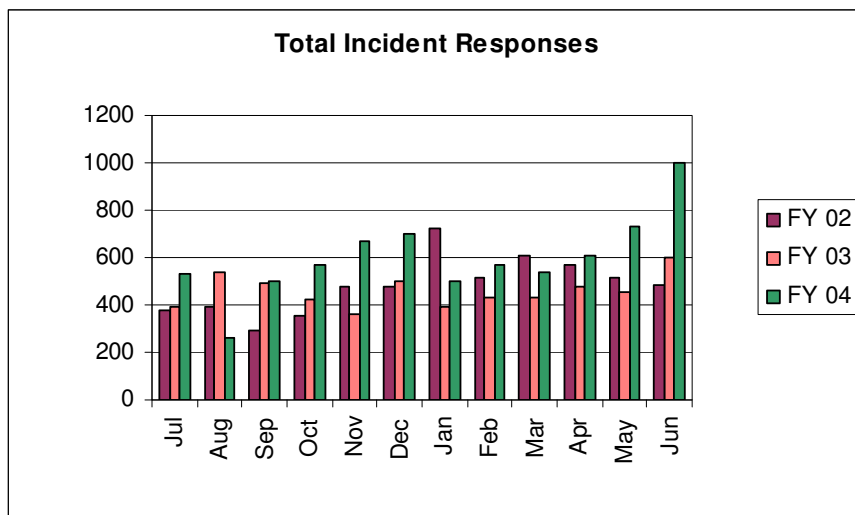
- Scheduling for the traffic signal interconnect project for St. George has begun. This project involves integrating 49 traffic signals onto an i2TMS server. This is an interagency project that will integrate 24 State signals and 25 St. George City signals using canopy wireless radios.

Acronyms

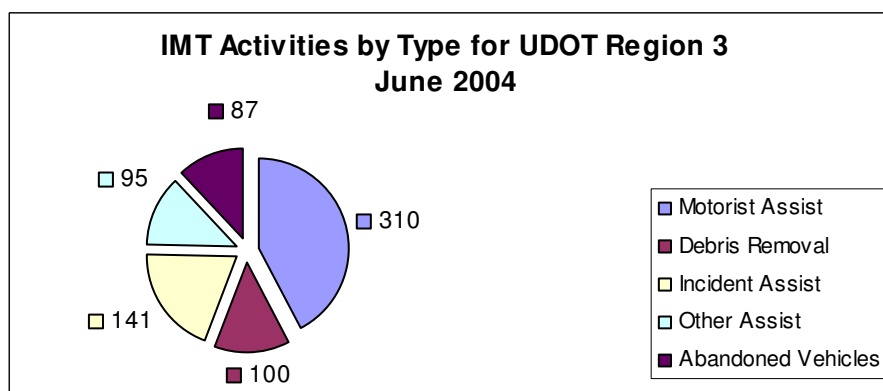
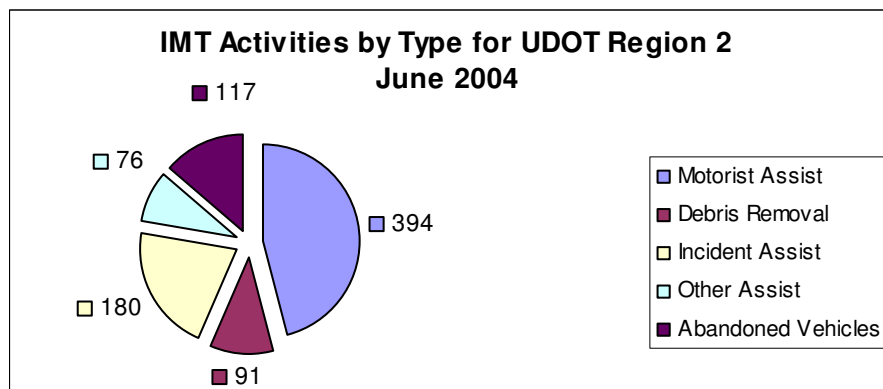
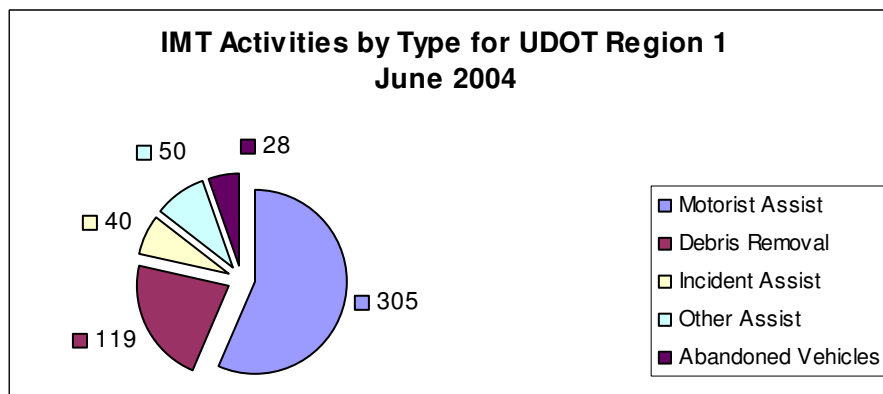
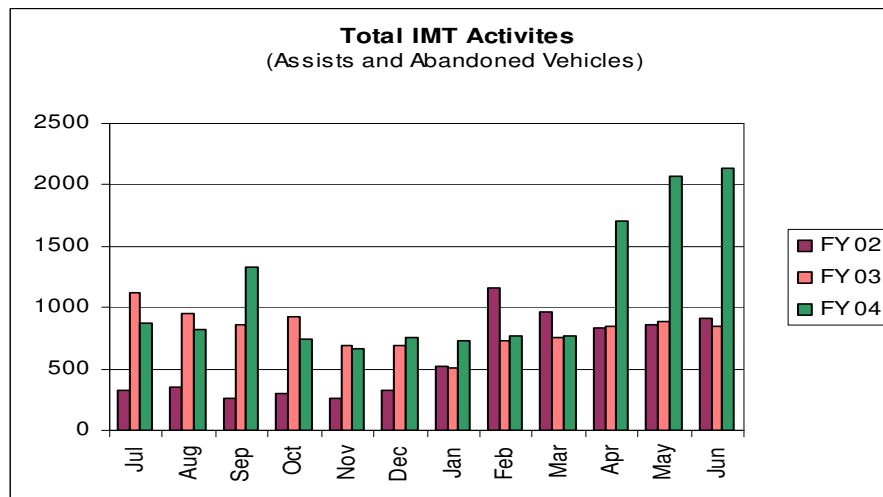
ATMS	Advanced Traffic Management System	TMS	Traffic Monitoring Station (count station)
CCTV	Closed Circuit Television	TOC	Traffic Operations Center
DPS	Department of Public Safety	TTI	Travel Time Index
HAR	Highway Advisory Radio	VMS	Variable Message Sign
RWIS	Road-Weather Information System	i2TMS	Integrated Interagency Traffic Management System

Safety

An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Crashes are separated into three subcategories: property damage, personal injury, and fatal. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts. An incident remains active until it has been completely cleared from the roadway.



Incident Management Team (IMT) Activities



Freeway Traffic Level of Service

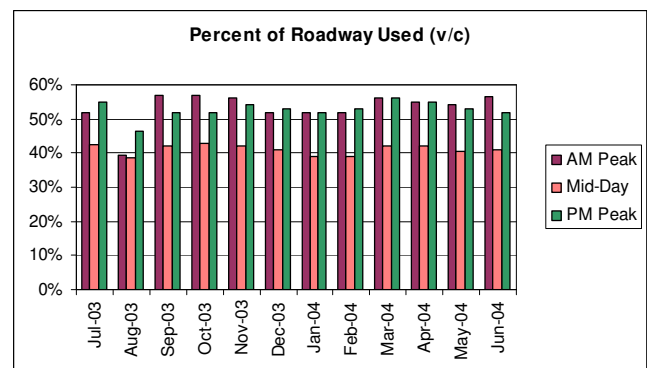
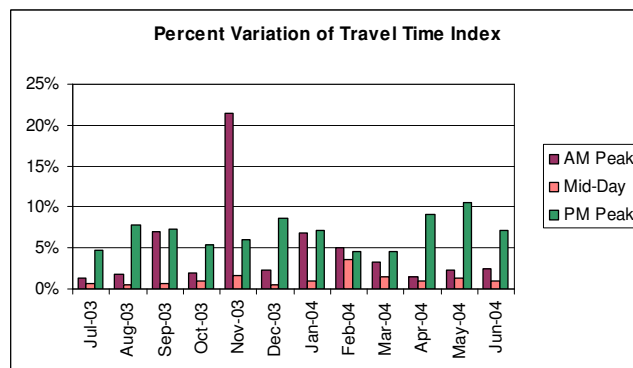
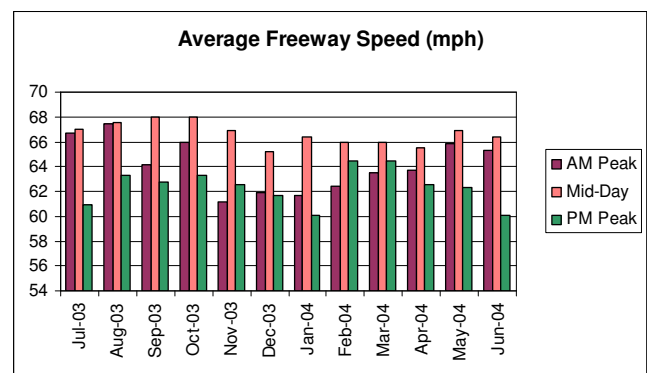
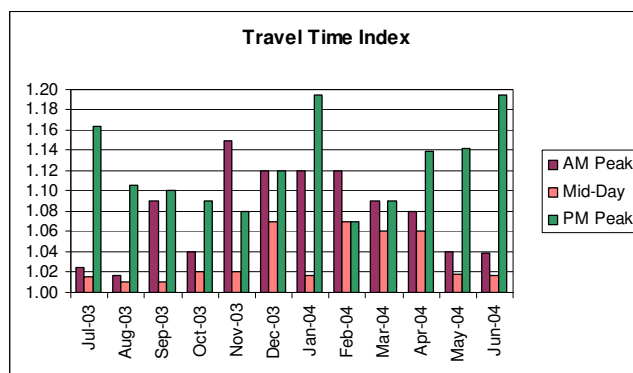
Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Salt Lake Valley. As more TMS sites are installed throughout the state, they will be included in these performance measures.

Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

Average Freeway Speed: The freeway speed is weighted by volume.

Percent of Roadway Used: The percent of roadway used is the ratio of the volume on the segment to its capacity. This is otherwise known as the volume to capacity ratio, or (v/c).



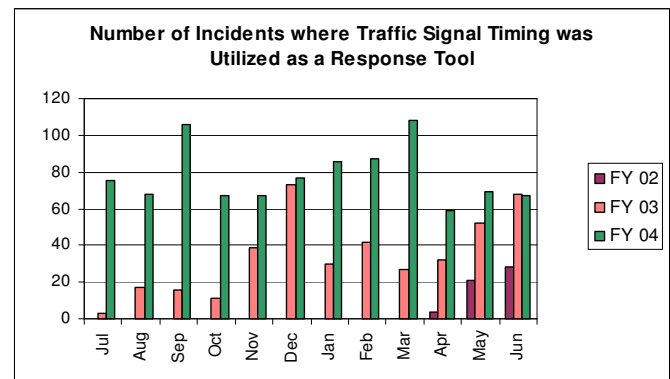
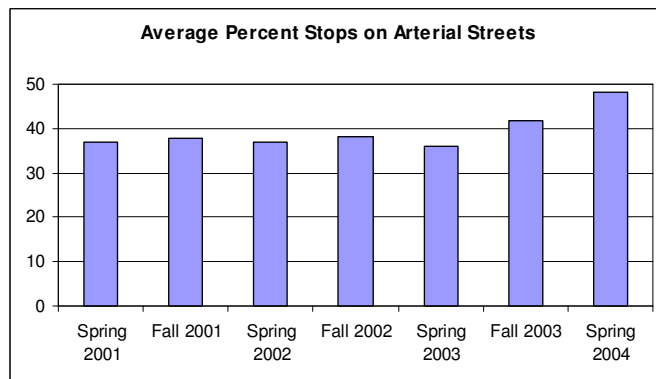
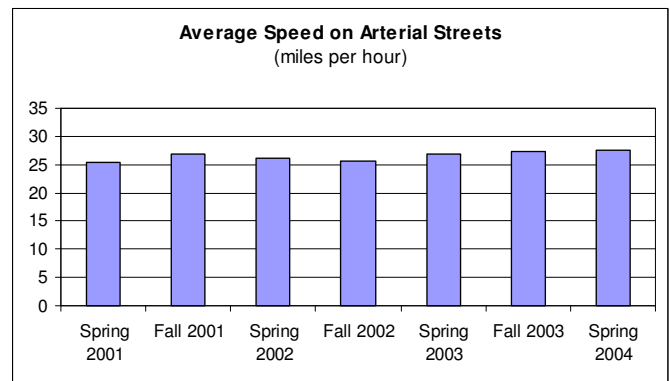
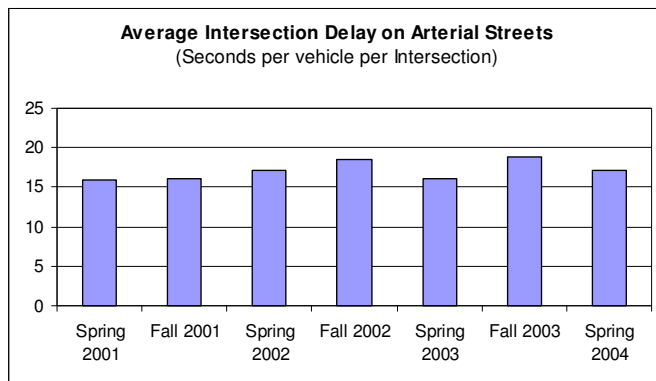
The 5 links with the highest average Travel Time Index for the month are:

Segment	Period	Avg Of TTI
SR-201 WB from I-15 to I-215 W	PM Peak	1.16
I-15 SB from 4500 S to I-215 S	PM Peak	1.13
SR-201 EB from I-215 W to I-15	AM Peak	1.13
I-215 W SB from SR-201 to I-15	PM Peak	1.12
SR-201 EB from I-215 W to I-15	PM Peak	1.12

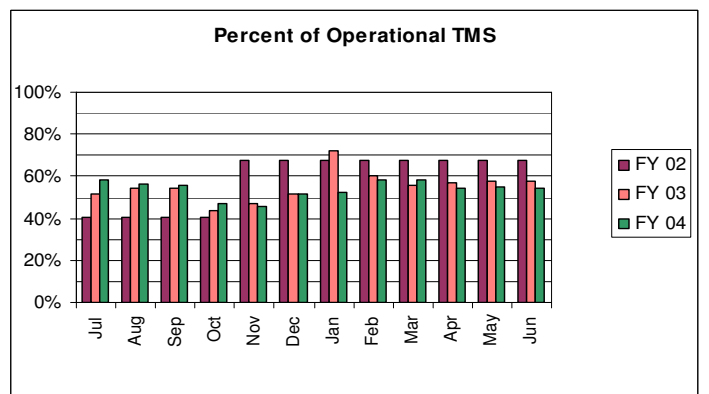
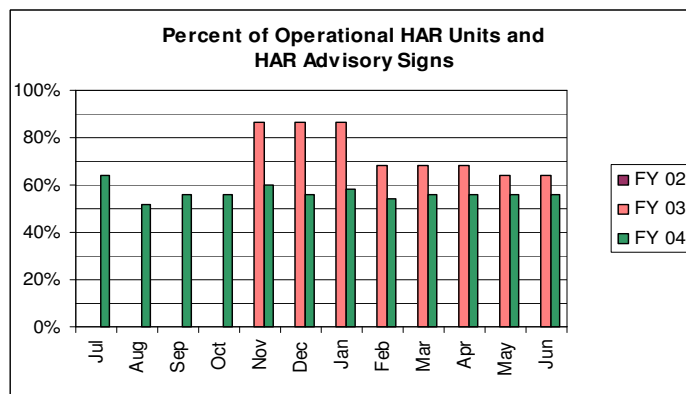
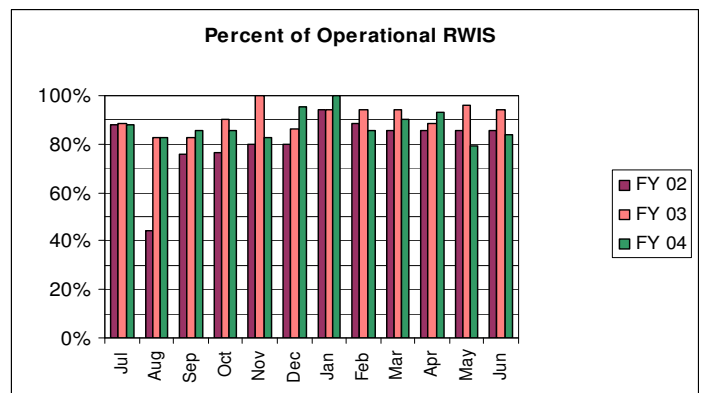
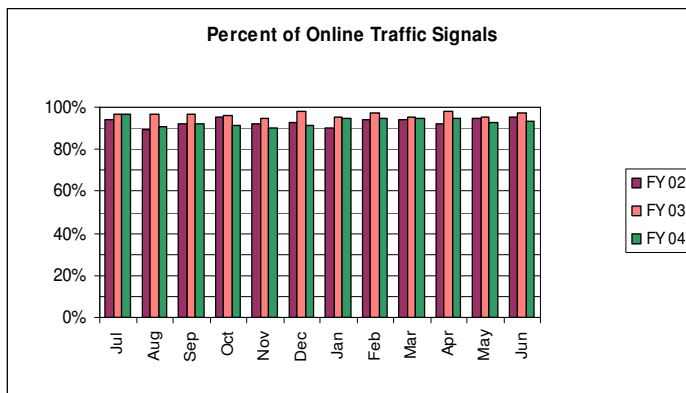
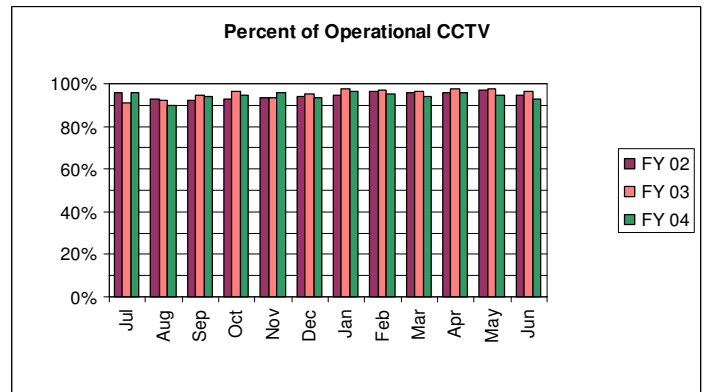
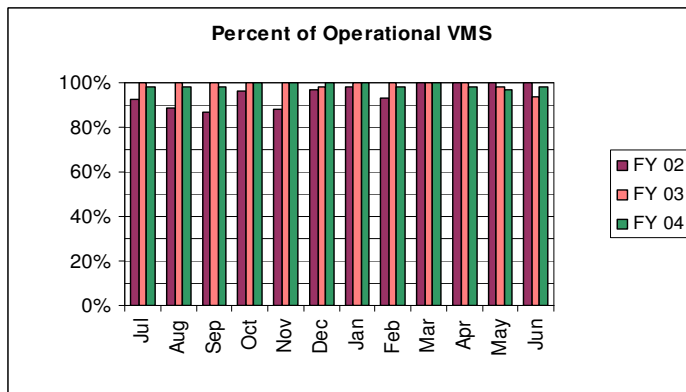
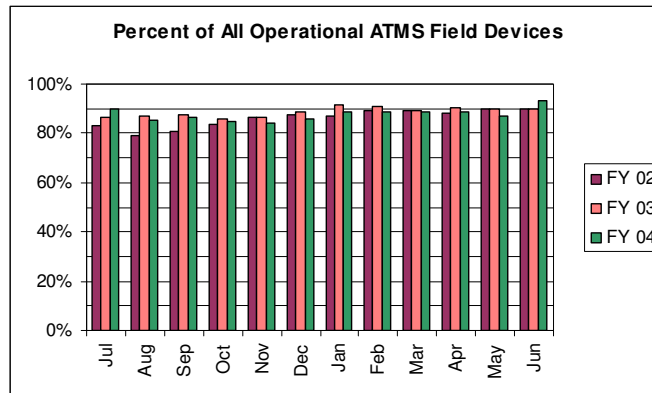
Surface Street Traffic Level of Service

The surface street traffic statistics are generated through a series of Travel Time measurements. These are conducted using a special equipped vehicle which measures the average travel time, the average percent of intersections at which a vehicle must stop, the average time stopped at an intersection, and the average speed. The Traffic Systems Section gathers these measurements from Regions 1, 2, 3, and 4 twice each year. The chart in the lower right hand corner shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.

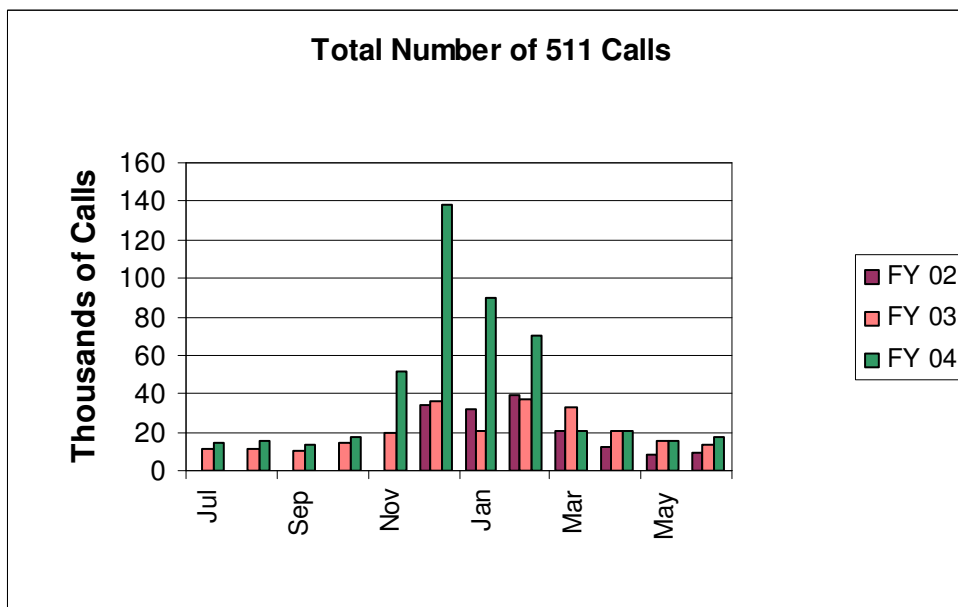
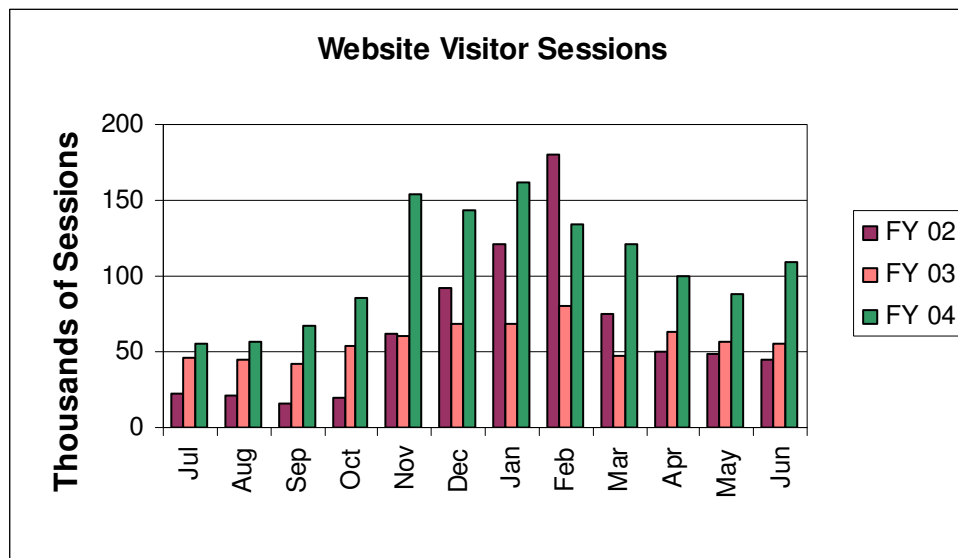
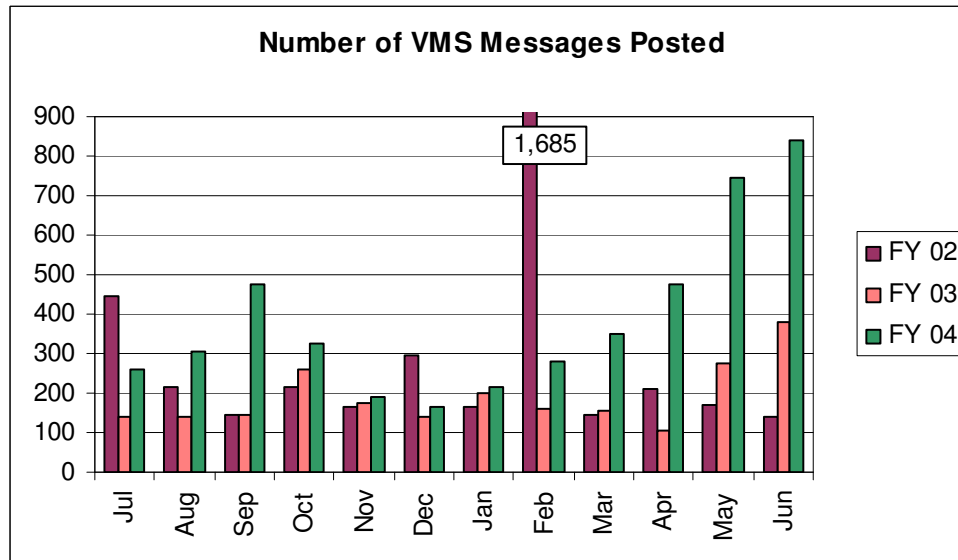
The following charts illustrate the data gathered up to Spring 2004. The following months will show charts for a specific Region compared to the statewide average. The charts below represent the semi-annual statewide averages.



Maintenance

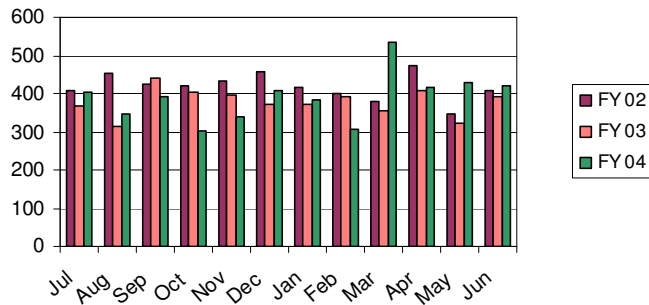


Traveler Information

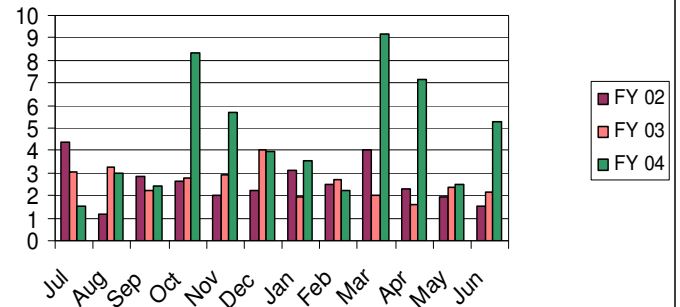


Customer Service

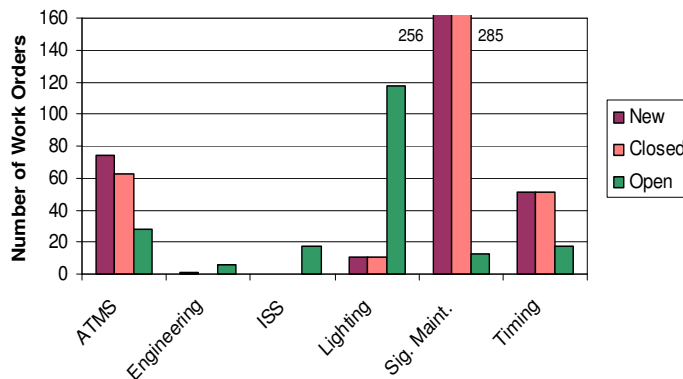
Number of New Work Orders



Overall Average Work Order Turnaround Days



Work Order Status by Group



Work Order Status for All Groups for FY04

